

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 0 816 100 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
10.06.1998 Bulletin 1998/24

(51) Int Cl. 6: B41J 2/175

(43) Date of publication A2:
07.01.1998 Bulletin 1998/02

(21) Application number: 97304353.2

(22) Date of filing: 20.06.1997

(84) Designated Contracting States:
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE

(30) Priority: 28.06.1996 US 673298

(71) Applicant: Mitsubishi Pencil Corporation of
America
Chatsworth, California 91313-4119 (US)

(72) Inventor: Hayao, Sakae
Chatsworth, California 91313-4119 (US)

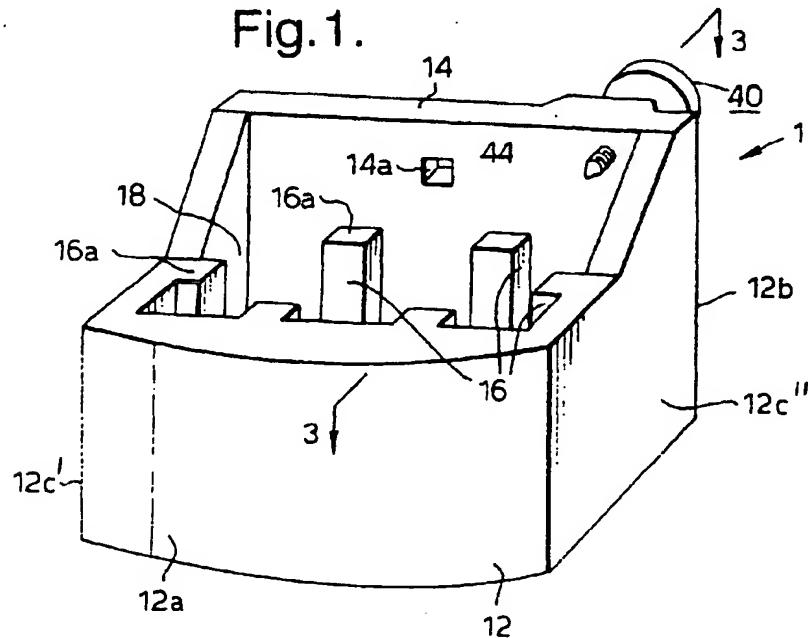
(74) Representative: Style, Kelda Camilla Karen et al
Page White & Farrer,
54 Doughty Street
London WC1N 2LS (GB)

(54) Method and apparatus for refilling a print cartridge

(57) An apparatus and method for refilling ink into a used, empty ink cartridge for ink-jet printers using an ink refill station (10) and an ink refill adapter (50), the ink refill station (10) accommodating the cartridge so that the head section of the cartridge is separated by a pressing or shearing force applied by a threaded screw (40)

that is provided in the refill station, and the ink refill adapter being placed on the main section of the cartridge after the head section is removed so that ink is transferred from an ink container to the main section of the cartridge via needles (62) provided in the ink refill adapter (50).

Fig. 1.



EP 0 816 100 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 30 4353

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.6)	
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	B41J2/175	
A	EP 0 704 308 A (PMS GMBH PROD & RECYCLING) * column 7, line 55 - column 11, line 7: figures 1-4 *	1,2,8, 13,14	B41J2/175	
P,A	DE 196 48 456 A (SMITH CORONA CORP) * column 4, line 61 - column 7, line 13: figures 4-8 *	1,2,8, 13,14		
P,A	WO 97 15449 A (OLIVETTI LEXIKON S P A) * page 5, line 9 - page 10, line 5: figures 1,2 *	1,2,8, 13,14		
P,A	US 5 581 287 A (BAEZNER MICHAEL A ET AL) ---	1,2,8, 13,14		
A	EP 0 709 205 A (HEWLETT PACKARD CO) ---			
A	EP 0 603 910 A (CANON KK) ---			
P,A	EP 0 771 663 A (ROTRING INT GMBH) -----		B41J	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)	
Place of search	Date of compilation of the search	Examiner		
THE HAGUE	9 April 1998	Adam, E		
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document		
X : particularly relevant if taken alone				
Y : particularly relevant if combined with another document of the same category				
A : technological background				
O : non-written disclosure				
P : intermediate document				